

CLAIM AMENDMENTS

Please amend the claims by canceling claims 13-15, amending claims 16, 19 and 20, and adding new claims 21-29, all without prejudice, as indicated on the following listing of all the claims in the present application after this Amendment:

1-15. (Canceled)

16. (Currently amended) ~~The device of Claim 15,~~

An improved transceiver system for sending and receiving infrared signals, comprising:

_____ a circuit structure defined by a front side and a back side;

_____ at least one infrared emitting device located on said front side;

_____ at least one infrared detecting device also located on said front side;

_____ a transceiver circuit device located on said front side;

_____ said infrared detecting device further comprising a front side and a back side, said infrared detecting device back side aligned to face said front side of said circuit structure;

_____ said infrared emitting device further comprising a back side, said infrared emitting device back side aligned to face said infrared detecting device front side, whereby said infrared emitting device and said infrared detection device form an integrated infrared emitting and infrared detection device;

_____ said integrated infrared emitting/infrared detection device is located on said front side of said transceiver circuit device to form a transceiver/infrared emitting/infrared detection device stack;

_____ a primary lens element providing an optical path, said primary lens element and said transceiver/infrared emitting/infrared detection device stack cooperatively located such that said transceiver/infrared emitting/infrared detection device stack is aligned with said optical path

_____ further comprising a secondary lens unit aligned along said single optical path, the primary lens located between the secondary lens and the at least one infrared emitting device, the secondary lens unit causing a ray to be refracted such that the angle of the ray with respect to the secondary lens is modified by passing through the lens.

17. (Original) The system of Claim 16, further comprising:
a housing encapsulating said transceiver/infrared emitting/infrared detection device stack.

18. (Canceled)

19. (Currently amended) An improved process for transmitting and receiving infrared signals from an infrared transceiver assembly comprising a circuit structure defining a ~~front~~ first side and a ~~back~~ second side, a transceiver circuit device, at least one infrared emitting device and at least one infrared detection device, the steps comprising:

transmitting infrared signals by transmitting signals to said transceiver circuit device, said transceiver circuit device being located on said ~~front~~ first side,

passing said signals through said transceiver circuit device and to said infrared emitting device, said infrared emitting device located on said second side;

emitting infrared signals from said infrared emitting device;

receiving infrared signals by receiving infrared signals with said infrared detection device, said infrared emitting device being stacked upon said infrared detection device to form an integrated infrared emitting/detection device stack;

passing said received signals to said transceiver circuit device; and

passing said received signals away from said transceiver circuit device.

20. (Currently amended) The process of Claim 19, wherein:

said first passing comprises passing said signals to said infrared emitting device via said circuit structure, said circuit structure comprising a printed circuit board ~~where said infrared emitting device is substantially in physical contact with said transceiver circuit device to form an integrated transceiver/infrared emitting/detection device stack;~~ and

said second passing comprises passing said received signals to said transceiver circuit device via said circuit structure ~~where said infrared detection device is substantially in physical contact with said transceiver circuit device to form an integrated transceiver/infrared emitting/detection device stack.~~

21. (New) An optical communication device for transmitting and receiving optical communication signals, comprising:

an optical receiving device that receives a first optical signal at a first surface;

an optical transmission device that emits a second optical signal from a second surface, the first and second surfaces facing in a common direction;

a support element, the optical receiving device and the optical transmission device mounted to a first side of the support element; and

a transceiver device in communication with both the optical transmission device and the optical receiving device, the transceiver device mounted on a second side of the support element, the second side in opposition to the first side.

22. (New) The optical communication device of claim 21 wherein the support element is a printed circuit board.

23. (New) The optical communication device of claim 21 wherein the optical receiving device and the optical transmission device are both directly mounted to the first side of the support element and are spaced apart along the first side of the support element.

24. (New) The optical communication device of claim 21 wherein the optical transmission device is mounted on the optical receiving device and the optical receiving device is mounted on the first side of the support element.

25. (New) The optical communication device of claim 21 wherein the transceiver device has a circuit on a third surface, the third surface facing the second side of the support element.

26. (New) The optical communication device of claim 21 wherein the transceiver device has a circuit on a third surface, the third surface facing away from the second side of the support element.

27. (New) The optical communication device of claim 21 further comprising a transmission lens that passes a ray from the optical transmission device.

28. (New) The optical communication device of claim 21 further comprising a receiving lens that passes a ray to the optical receiving device.

29. (New) The optical communication device of claim 21 further comprising a single lens that passes a first ray from the optical transmission device and passes a second ray to the optical receiving device.